

## SYLLABUS

### 1. Data about the program of study

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	Faculty of Automotive Engineering, Mechatronics and Mechanics
1.3	Department	Automotive Engineering and Transportation
1.4	Field of study	Automotive Engineering
1.5	Cycle of study	Master in Science
1.6	Program of study/Qualification	Tehnici Avansate în Ingineria Autovehiculelor (Advanced Techniques in Automotive Engineering) - în limba engleză
1.7	Form of education	Full time
1.8	Subject code	21.00

### 2. Data about the subject

2.1	Subject name	Field Specific Research for the Master Thesis				
2.2	Subject area	Automotive Engineering				
2.2	Course responsible/lecturer	-				
2.3	Teachers in charge of seminars	-				
2.4	Year of study	II	2.5 Semester	II	2.6 Assessment	C
2.7	Subject category	Formative category			DA	
		Optionality			DI	

### 3. Estimated total time

3.1	Number of hours per week	7	of which	3.2	0	3.3	0	3.3	0	3.3	7
				Course		Seminar		Laborator		Proiect	
3.4	Total hours in the curriculum	98	of which	3.5	0	3.6	0	3.6	0	3.6	98
				Course		Seminar		Laborator		Proiect	
3.7 Individual study:											
(a) Manual, lecture material and notes, bibliography											0
(b) Supplementary study in the library, online and in the field											150
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays											0
(d) Tutoring											0
(e) Exams and tests											2
(f) Other activities											-
3.8 Total hours of individual study (summ (3.7(a)...3.7(f)))					152						
3.9 Total hours per semester (3.4+3.8)					250						
3.10 Number of credit points					10						

### 4. Pre-requisites (where appropriate)

4.1	Curriculum	
4.2	Competence	

## 5. Requirements (where appropriate)

5.1	For the course	
5.2	For the applications seminarului / laboratorului / proiectului	

## 6. Specific competences

Professional competences	<p>Mastery of the theoretical foundations and underpinning the elaboration of a given technical project;</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Knowledge of the general principles and the stages of the elaboration of a project;</li> <li><input type="checkbox"/> Evaluation of the applicability, of the social, economic and environmental effects after the implementation of the project;</li> <li><input type="checkbox"/> Identification of the main directions of action regarding the organizational systems;</li> <li><input type="checkbox"/> Develop a theoretical, experimental, numerical model;</li> <li><input type="checkbox"/> Make a preliminary study.</li> </ul>
Cross competences	<p>Respecting the principles, norms and values of the professional ethics code by addressing a rigorous, efficient and responsible work strategy for problem solving and decision-making.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Applying the techniques of multidisciplinary teamwork and multidisciplinary work, on different hierarchical levels, within the working team - specific project management.</li> <li><input type="checkbox"/> Appropriate use of effective lifelong learning methods and techniques;</li> <li><input type="checkbox"/> Appropriate use of information and oral and written communication in a European language.</li> </ul>

## 7. Discipline objectives (as results from the *key competences gained*)

7.1	General objective	Application of advanced methods in the design, construction, maintenance, repair and operation of motor vehicles.
7.2	Specific objectives	Achieving a theoretical, experimental, numerical model; Performing a preliminary study; Continue advanced documentation by using an internationally indexed database

## 8. Contents

8.1. Lecture (syllabus)	Number of hours	Teaching methods	Notes
-			
8.2. Seminars /Laboratory/Project	Number of hours	Teaching methods	Notes
The venue and the content of the practical activity are agreed upon by the student and the coordinating teacher, depending on the topic of the dissertation thesis.		Practical work; processing and interpretation of results	
Bibliography ✓ 5 titles, established together with the tutor			

**9. Bridging course contents with the expectations of the representatives of the community, professional associations and employers in the field**

The content of the discipline is in line with the concerns of the companies in the field and the current directions of scientific research.

**10. Evaluation**

Activity type	10.1 Assessment criteria	10.2 Assessment methods	10.3 Weight in the final grade
10.4 Course	-	-	-
10.5 Seminars /Laboratory/Project	-	the rating (A / R) is proposed by the didactic coordinator of the dissertation	100%
10.6 Minimum standard of performance			
☑ The ability to identify optimal methods in the field.			
☑ The ability to identify the itinerary and organize the processes specific to the field.			

Date of filling in:		Title Surname Name	Signature
10.06.2024	Lecture	-	
	Teachers in charge of application (masters program responsible)	Prof. PhD Habil. Eng. Bogdan VARGA	

Date of approval in the department ART 26.06.2024 _____	Head of department Prof.PhD.Eng. Barabás István
Date of approval in the faculty ARMM 28.06.2024 _____	Dean Prof.PhD.Eng. Filip Nicolae